

CLAIMS

1. A screen printing screen frame which is variable in the length of its frame sides and to which a screen is attached or with the use of screen hooking tools fixed to the screen, wherein
5 there is provided a screen frame constituted by combining screen frame side or a screen frame side intermediate portion fitted loosely to an end portion of each corner of the screen frame, the screen hooking tools fixed to the screen, and fitting portions or joints of the screen fitting and hooking the screen hooking tools on the upper surface of each frame side of the screen frame for detachably, and screen frame side length extensible means which consists mainly of male thread
10 receivers provided with female threads provided to extend from each end of the frame corner via the frame side to a corresponding end of the other frame corner or female threads provided in the frame side intermediate portions and male threads provided for mating with the male thread receivers or the female threads of the frame corners.

15 2. A screen printing screen frame having frame sides made of a metal or a synthetic resin material and arranged of an orthogonal shape, a hollow orthogonal shape, a C shape, or an L shape in the cross section for spreading a screen printing screen, wherein the frame sides of a hollow tube is closed or the frame sides of a hollow tube is provided with openings at one end and having an orthogonal shape or a C shape or an L shape in the cross section and welded or
20 fixed to one another, a number of thread apertures provided in the side surfaces of the hollow or orthogonal frame sides or in the inner or outer side surface or the inner, outer, or both side surfaces of the C shape frame sides or in the side and outer sides of the L shape frame sides, tension adjusting bars having the predetermined number of thread apertures and the predetermined number of female thread apertures provided at a corresponding position to the
25 thread apertures and tension adjusting screws threaded into the female thread apertures and

inserted into or built-in the hollows of the frame sides or into the orthogonal frame sides or into the C shape of the C shape frame sides or into the L shape frame sides, wherein the tension on the screen is controlled by the frame sides deflecting horizontally with the tension adjusting screws moving forward and backward thus to eliminate unwanted distortion or skew of images on a print.

3. A method of bonding, curing, and embossing of mesh or sheet screens comprising the steps of:

butt joining or overlap joining screens together; providing a peelable sheet or an embossed peelable sheet on the upper, lower, or both sides of the bonded or cured joint and securing the joint with an adhesive agent or by thermal fusing or providing a set of molds to the joint and filling the molds with a molding agent; removing the peelable sheet or the embossed peelable sheet or the molds after the molding agent is cured; and smoothing the upper, and lower, or both sides of the bonded or cured joint, whereby a step at the joint between the screens is filled or the mesh is sealed with the adhesive agent and the screens are covered with a layer of the adhesive agent or embossed at the surface.

4. A method of spreading a screen printing screen comprising the steps of:

providing hooking portions in a screen frame, which is variable in each side length, for accepting screen hooking tools; hooking the screen hooking tools of a screen into the hooking portions or fixing the screen to the screen frame; and adjusting the length of each side of the screen frame with the use of screen frame adjusting means to give a tension on the screen suited for the printing.

5. A screen frame which is variable in the length of its sides comprising assembling four

L-shaped corners and four frame sides, which have insertion apertures provided in both ends thereof for accepting the L-shaped corners, by inserting the four L-shaped corners at their end into the insertion apertures to develop a screen frame construction provided with screen frame side length extensible means, or

- 5 locating four L-shaped frame sides, each frame side composed of a long side and a short side joined in an L shape and has an insertion aperture provided in one end of the long side thereof for accepting the short side of an adjacent L-shaped frame side, so that the long side of each frame side is opposite to the short side of a neighbor frame side and inserting the short sides into the corresponding long sides to develop a screen frame construction provided with screen
- 10 frame side length extensible means, or

 assembling four L-shaped corner frame side, defined by separating a screen frame at the center of each side and having insertion apertures provided in both ends thereof for accepting auxiliary frame sides, by inserting the auxiliary frame sides into the corresponding insertion apertures of the L-shaped corner frame sides to develop a screen frame construction provided

- 15 with screen frame side length extensible means